

## CLAIMS

What is claimed is:

1. A method, comprising:

activating an inactivated reference voltage and deactivating an active reference voltage in response to an input voltage crossing an inactivated reference voltage; and,  
changing an output in response to said input voltage crossing said activated reference voltage.

2. The method of claim 1, further comprising:

not responding by changing said output to said input voltage crossing said activated reference voltage for a period of time.

3. A method, comprising:

activating a first reference voltage;  
changing an output in response to an input voltage crossing said first reference voltage; and,  
activating a second reference voltage and deactivating said first reference voltage in response to said input voltage crossing said second reference voltage.

4. The method of claim 3, further comprising:

holding said output after said changing for a period of time.

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5. The method of claim 4, further comprising:

changing said output in response to said input voltage crossing said second reference voltage; and,  
activating said first reference voltage and deactivating said second reference voltage in response to said input voltage crossing said first reference voltage.

6. A method of receiving a signal, comprising:

comparing an input to a first reference that is activated and a second reference that is deactivated; and,  
changing an output when said input crosses the one of said first reference and said second reference that is activated; and,  
activating said second reference and deactivating said first reference when said input crosses the one of said first reference and said second reference that is deactivated.

7. The method of claim 6, further comprising:

holding said output for a period of time without regard to said input signal crossing said one of said first reference and said second reference that is activated.

8. An apparatus, comprising:

means for activating an inactivated reference voltage and means for  
deactivating an active reference voltage in response to an input voltage  
crossing an inactivated reference voltage; and,  
means for changing an output in response to said input voltage crossing said  
activated reference voltage.

9. The method of claim 8, further comprising:

means for not responding by changing said output to said input voltage  
crossing said activated reference voltage for a period of time.

10. An apparatus, comprising:

a first comparator, having a first output, that compares a first reference to an  
input signal;

a second comparator, having a second output, that compares a second  
reference to said input signal;

a selector that passes one of said first output and said second output to a  
receiver output depending upon which of said first reference and said second  
reference is activated; and,

an activator/deactivator that controls said selector in depending upon the state  
of said first output and said second output.

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11. The apparatus of claim 10, comprising:

a holder that prevents said receiver output from changing for a period of time after a change in which of said first reference and said second reference is activated and which is deactivated.

12. An apparatus, comprising:

a first reference voltage;

a second reference voltage;

an input signal;

a MUX that selects one of the results of a first comparison between said first reference voltage and said input signal and a second comparison between said second reference voltage and said input signal based upon which of said first reference voltage and said second reference voltage is closer to said input signal.

13. The apparatus of claim 12, comprising:

an output that depends upon said one of results during times that are a predetermined time after a change on said output.

14. An apparatus for detecting low-to-high and high-to-low transitions on an input signal, comprising:

a first reference voltage that is compared to an input signal and detects low-to-high transitions when said input signal crosses from lower than said first reference voltage to higher than said first reference voltage;

a second reference voltage that is compared to said input signal and detects high-to-low transitions when said input signal crosses from higher than said second reference voltage to lower than said second reference voltage wherein said first reference voltage is lower than said second reference voltage.

15. The apparatus of claim 14, comprising:

a holder that holds an output high after a low-to-high transition is detected for a first period of time and holds said output low for a second period of time after a high-to-low transition is detected.